Multilayer Infrared Reflecting Film With High and Smooth Transmission in Visible Wavelength Region and Laminate Articles Made Therefrom

ABSTRACT

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A film includes a multilayer stack composed of unit cells having alternating optical layers of first and second diverse polymers A,B. The unit cells can consist essentially of two (AB), four (2A1B2C1B), or six layers (7A1B1A7B1A1B). The layers form an effective optical packet disposed between non-optical layers, the beginning and ending optical layers of which are selected to control an optical figure of merit such as spectral noise in the visible region. The arrangement of layers beginning at one end of the effective optical packet defines a specific cyclic permutation of the unit cell layer order, which provides a better figure of merit than an effective optical packet of similar design but having a different cyclic permutation.